



For immediate release

Rotavirus vaccine cuts infant diarrhea deaths by a third in Malawi

Baltimore, MD, 11 August 2018 - A major new study has shown that rotavirus vaccination reduced infant diarrhea deaths by one-third in rural Malawi, a region with high levels of child deaths.

The study led by scientists at the University of Liverpool, UCL, Johns Hopkins Bloomberg School of Public Health and partners in Malawi provides the first population-level evidence from a low-income country that rotavirus vaccination saves lives.

The findings, published in *The Lancet Global Health*, add considerable weight to the World Health Organization's (WHO) recommendation for rotavirus vaccine to be included in all national immunization programs.

Professor Nigel Cunliffe from the University of Liverpool's Centre for Global Vaccine Research, one of the study leads, said: "Rotavirus remains a leading cause of severe diarrhea and death among infants and young children in many countries in Africa and Asia. Our findings strongly advocate for the incorporation of rotavirus vaccine into the childhood immunization programs of countries with high rates of diarrhea deaths, and support continued use in such countries where a vaccine has been introduced."

Rotavirus is the most common cause of diarrheal disease among infants and young children. Despite improvements in sanitation and case management, rotavirus still caused 215,000 child deaths in 2013, with 121,000 of these in Africa. With support from Gavi, the Vaccine Alliance,

many countries in Africa with high death rates have added rotavirus vaccine to their routine immunization program over the past five years.

To determine the vaccine's impact on infant diarrhea deaths, researchers carried out a large population-based birth cohort study of 48,672 infants in Malawi, which introduced a monovalent rotavirus vaccine in October 2012.

As low-income African countries often lack birth and death registries – a resource used for similar impact studies in middle-income countries - the investigators and their study team of more than 1,100 people visited the homes of infants in 1,832 villages over the course of four years to collect data, including the infants' vaccination status and whether they survived to age one.

The study findings reveal that children who received the rotavirus vaccine had a 34% lower risk of dying from diarrhea, which is a similar impact to that observed in middle-income countries.

“This is encouraging because children from the sub-Saharan African region account for more than half of global diarrhea deaths, and with over 30 African countries thus far introducing rotavirus vaccine, the absolute impact on mortality is likely to be substantial,” said one of the report’s lead authors Dr Carina King, a senior research associate at UCL’s Institute for Global Health.

Co-lead author Dr Naor Bar-Zeev, Associate Professor of International Health at the International Vaccine Access Center of the Johns Hopkins Bloomberg School of Public Health, added: “We already knew that rotavirus vaccine reduces hospital admissions and is highly cost-effective in low-income countries with a high burden of diarrheal disease, and now we've been able to demonstrate that it saves lives.

“However not all countries are vaccinating against rotavirus yet, including some very populous countries. The key message of this paper is that to do the best by all our children and to help them survive, all countries should introduce rotavirus vaccination.”

The researchers also found a direct link between the proportion of the population vaccinated and the reduction in mortality that achieved. Malawi had a strong immunization program and

was very proactive in planning to introduce rotavirus vaccine, which made it possible to scale up coverage rapidly.

“Within about a year from vaccine introduction, we were able to reach up to 90% of the population. It is vitally important that rotavirus vaccines reach all children, especially the most vulnerable living in poorer settings where the impact of vaccination is greatest,” said one of the authors Dr Charles Mwansambo, Chief of Health Services for Malawi.

“It is wonderful to see leading-edge science led by a collaboration of Malawian institutions that shows the strong benefit of vaccination. Vaccine impact in Malawi is directly relevant to other settings around the world that are yet to introduce rotavirus vaccine,” said Professor Melita Gordon, who leads the program on Preventing Death from Severe Infection at the Malawi-Liverpool-Wellcome Trust Clinical Research Programme (MLW).

The study received funding support from the Wellcome Trust and GlaxoSmithKline Biologicals.

ENDS

Notes to editors

Research reference

Bar-Zeev N, King C, Phiri T, Beard J, Mvula H, Crampin AC, et al. Impact of monovalent rotavirus vaccine on diarrhoea-associated post-neonatal infant mortality in rural communities in Malawi: a population-based birth cohort study. *Lancet Glob Health* 2018; 6: e1036–44

Online link: [http://www.thelancet.com/journals/langlo/article/PIIS2214-109X\(18\)30314-0/fulltext](http://www.thelancet.com/journals/langlo/article/PIIS2214-109X(18)30314-0/fulltext)

About ROTA Council

The ROTA Council is a network of child health leaders from around the world who promote the use of rotavirus vaccines as part of a comprehensive approach to addressing diarrheal disease. The ultimate goal: to save lives and improve health. The ROTA Council is unique in providing scientific and technical evidence through credible scientific authorities—the individual Council members—who communicate to policymakers the need to accelerate the introduction of rotavirus vaccines in high-burden countries. Learn more at <http://rotacouncil.org> follow @Rotacouncil on Twitter.

About University of Liverpool

Founded in 1881 as the original ‘red brick’, the University of Liverpool is one of the UK’s leading research-intensive higher education institutions with an annual income of £523 million, including £95 million for research. Consistently ranked in the top 200 universities worldwide, we are a

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UCL was founded in 1826. We were the first English university established after Oxford and Cambridge, the first to open up university education to those previously excluded from it, and the first to provide systematic teaching of law, architecture and medicine. We are among the world's top universities, as reflected by performance in a range of international rankings and tables. UCL currently has over 41,500 students from 150 countries and over 12,800 staff. Our annual income is more than £1 billion.

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About the International Vaccine Access Center (IVAC)

The International Vaccine Access Center (IVAC) applies rigorous science to build knowledge and support for the value of vaccines. Located in the Department of International Health at the Johns Hopkins Bloomberg School of Public Health, with a team of over 40 physicians and professors, economists and epidemiologists, researchers and advocates, IVAC provides global technical leadership on over 15 vaccine-preventable diseases. IVAC's approach utilizes leading-edge science, clear communication, productive partnership, and capacity building. By generating, synthesizing, and using evidence to inform decision-making and action, we accelerate equitable and sustainable access to vaccines globally. Learn more at www.jhsph.edu/ivac/ Follow us on Twitter [@IVACtweets](https://twitter.com/IVACtweets)

About the Malawi-Liverpool-Wellcome Trust Clinical Research Programme

The Malawi-Liverpool-Wellcome Trust Clinical Programme (MLW) conducts internationally excellent science to benefit human health with a focus on sub-Saharan Africa. MLW is built around excellent laboratories, strategically located in the largest hospital in Malawi, closely linked with the community and an integral part of the medical school. These relationships provide a unique opportunity replicated in few centres in Africa to study major health issues spanning both community and hospital. The MLW focuses on preventing deaths from severe infection and on reducing transmission from infectious disease.

<http://www.mlw.mw/>